datavideo®

Digital Video Converter

DAC-100

Installation Guide

http://www.datavideo-tek.com

The Important Notice of Safety Instruction and Radio & TV Interference

1. Read all of these instructions and save them for later reference.
2. Follow all warnings and instructions marked on the products.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product.
6. Slots and openings on the cabinet and the back or bottom are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, do not block or cover these openings. The openings should never be blocked by placing the products on a bed, sofa, rug or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your dealer or local Power Company.
8. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be walked on.
9. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord to not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.

10. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
11. Except as explained elsewhere in this guide, don't attempt to service this product yourself. Opening and removing those covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks. Refer all servicing on those compartments to service personnel.
12. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    A. When the power cord or plug is damaged or frayed.
    B. If liquid has been spilled into the product.
    C. If the product has been exposed to rain or water.
    D. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
    E. If the product has been dropped or the cabinet has been damaged.
    F. If the product exhibits a distinct change in performance, indicating a need for service.

Service and Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo-tek.com for answers to common questions, support requests or contact your local office below.

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RADIO & TELEVISION INTERFERENCE

UNITED STATES. The equipment described in this guide generates and uses radio frequency energy. If it is not installed and used in accordance with the instructions in this guide, it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If necessary, you should consult your dealer or experienced radio/television technician for additional suggestions. You may find helpful the following booklet, prepared by the Federal Communications Commission: How to

Identify and Resolve Radio-TV Interference Problems. This booklet is available from the United States Government printing office, Washington, D.C. 20402. The booklet number is 004-000-00345-4.

Note: Changes or Modifications not expressly approved by the party responsible for compliance could void the users right to operate this equipment.

Peripheral used in conjunction with this equipment must be connected via shielded interface cables. Use of unshielded interface cables may result in interference to radio and TV reception, and may void the user's right to operate this equipment.

Declaration of Conformity

Model Number: DAC-100
Trade Name: Datavideo
Responsible: Datavideo Corporation (USA)
Address: 12300-U East Washington Blvd., Whittier,
CA 90606 USA
Telephone: (562) 696-2324

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

CONTENTS

Important Notice ---------- 1

Service and Support ---------- 3

Radio & Television Interference---------- 4

Introduction ---------- 7

Front Panel Control ---------- 8

Rear Panel Control ---------- 9

Important Notice for editing systems ------- 10

Configuring a DAC-100 with
Avid DV Xpress 3.5 on Windows XP---------- 14

Specifications ---------- 18

INTRODUCTION

Bi-Directional DV to Analog Video Converter
DV to Analog / Analog to DV

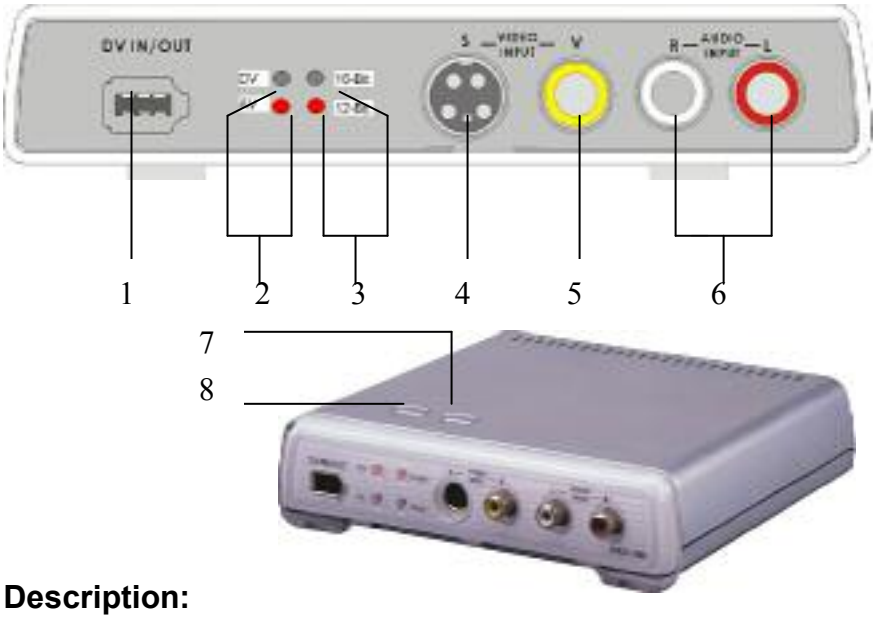
The DAC-100 is a simple, competent solution for encoding video and audio back and forth between analog tape and DV in both the Mac and PC platforms.

Using the DAC-100 to convert analog to DV let's you maintain the quality of your analog tape without generation loss.

Key Features

- Supports DV, S Video - Y/C, Composite inputs and outputs for easy conversion across platforms
- Video Comb Filter for High Quality Video
- Selectable digital audio sampling rate at 12-bit 32KHz or 16-bit 48KHz
- Selectable Audio Decoding at 32KHz, 44.1KHz and 48KHz
- Selectable 0 IRE / 7.5 IRE black level setting
- Compatible with DV (iLink), Digital 8, Video 8, Hi8, VHS, S-VHS, VHS-C and S-VHS-C formats
- Encode to or decode from the Mac environment
- FireWire In and out
- Works with PC Windows 98SE/ME/2000 and XP

FRONT PANEL CONTROL

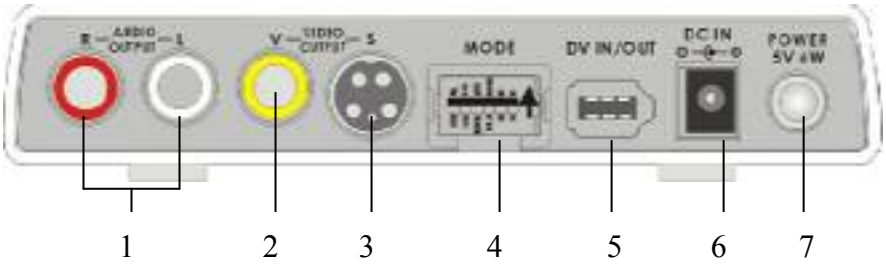


Description:

1. 6-Pin FireWire interface for DV In/Out
2. Video source indicators for DV or AV input
3. LED indicators for Audio encoder 12-Bit or 16-Bit
4. S-Video (Y/C) input connector.
5. Composite Video input RCA connector
6. Stereo Audio input RCA connectors
7. Push button to select 12-Bit or 16-Bit Audio encoding
8. Push button to select video input source DV or AV

Note: Please wait 5 seconds for the LED ready status to come on after you push the video source button. The system needs a few seconds to recognize a new video source setting.

REAR PANEL CONNECTION



Description:

1. Stereo Audio output RCA connectors
2. Composite Video output RCA connector
3. S-Video (Y/C) output connector
4. Mode DIP switch ***(Reboot the DAC-100 if you change a DIP Switch)***
   - **S1**. PAL or NTSC (PAL-ON, NTSC-OFF)
   - **S2**. 7.5 IRE / 0 IRE (0 IRE-ON, 7.5 IRE-OFF).

     Please note: 0 IRE is most often used in Japan. 7.5 IRE is used elsewhere.
   - **S3**. Auto / Manual DV Decode or Encode (Default at Manual Mode)

     (. Manual Mode (**S3 -- OFF**): select the input video manually, refer to Page 8)*

     (. Auto Mode (**S3 -- ON**) will enable protocol communication with editing system)*
   - **S4** & **S5** for NTSC and PAL video system

S5	ON	**S4**	ON	**Normal Mode** for DV Cam, MAC OS
	OFF	**S4**	ON	Windows ME / XP
			OFF	Windows 98, Windows 2000

   - **S6**. Reserved, set normal OFF.
5. 6-Pin FireWire interface for DV In/Out
6. DC Input Jack (+ 5VDC / 6Watts)
7. Power switch **(Note: Turn-on DAC-100 before booting the PC/MAC editing software.)**

IMPORTANT NOTICE FOR PC/MAC EDITING SYSTEMS

1. **Please *shut down all resident programs*** in your PC for better editing performance. Such as the Anti-Virus program, screen saver, system power management software… etc.

2. **Enable the Disk DMA function in windows to improve system HDD access performance**

   To install a proper HDD DMA or Bus Master driver will improve your PC system's overall performance.

   Please refer to following web site for various PC main board chipset drivers, which could be Disk DMA driver related to your system.

   INTEL chipset:
   http://www.intel.com/intel/nav/support.htm?iid=Homepage+HeaderSupport&
   VIA chipset:
   http://www.via.com.tw/drivers/index.htm
   ALI chipset:
   http://www.ali.com.tw/eng/support/support_driver.htm
   SIS chipset:
   http://www.sis.com/support/driver/index.htm

   Please make sure to download the right chipset driver for your system

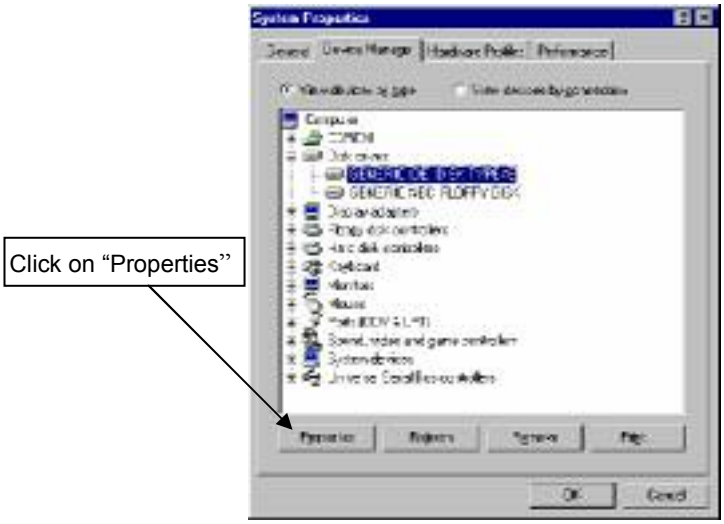
   If there is no any main board Chipset driver in your system, you may enable DISK DMA function in Windows device driver section. Please refer to the installation procedures below for windows 98.

   Note: *Windows ME has similar DISK DMA setting procedure as Windows 98 below; The DISK DMA are enabled as default setting in both Windows XP and Windows 2000 operating system.*

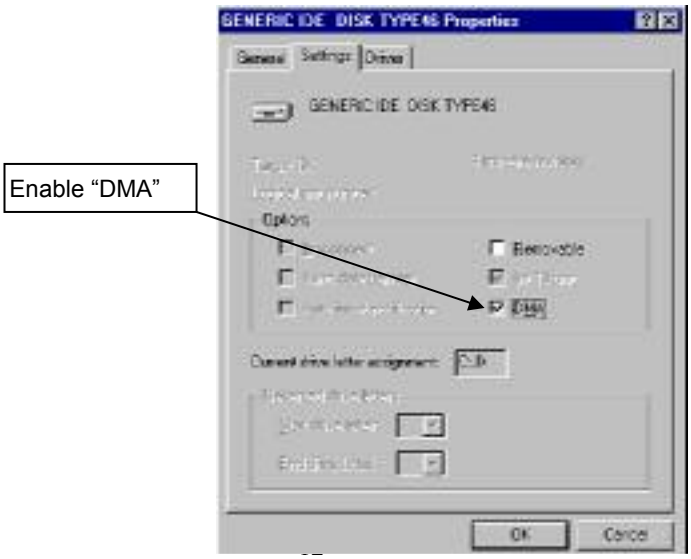
S1. On windows desktop, click on “**My computer**” and check the “**properties**”

S2. Click on “**Device manager**”

S3. Click on ”**Disk drives**” and Select “**Generic IDE Disk**” and then click on “**Properties”**



S4. Select “**Setting**” and enable “**DMA**” and click on “**OK**”.



3.**To work with MAC Final cut pro (Recommended)**:

1). Select "Preferences" from Final Cut Pro menu
2). Select "General" page.
3). ***Uncheck "Abort capture on dropped frame"***
4). ***Uncheck "Abort capture on time code break" for Final cut pro***
5). Click OK button

4. **For Avid XpressDV Users**:

1). Set the Dip switch to ***Windows 2000 mode*** (refer to page 9)
2). Launch the Avid XpressDV Software.
3). Check “Setting” and select the “Generic” DV Basic Device in the “Deck Configuration” menu.

*. **Note:** Please refer to following pages of the set up procedure for Avid XpressDV 3.5 / windows XP user.

CONFIGURING A DAC-100 WITH AVID XPRESS DV 3.5 ON WINDOWS XP

Screen 1 above shows a typical desktop in Xpress DV 3.5, key areas for setup have been highlighted. Please follow the steps below to configure your DAC-100 for use with Xpress DV 3.5.

Screen 1

Setup Procedure:

Step 1. Connect your DAC-100 to your computer via FireWire. (IEEE/1394 cable)

Step 2. Turn on your DAC-100 converter.

Step 3. Turn on your Windows computer.

Step 4. Launch the Avid Xpress DV software.

Step 5. Open an existing project or create a new one.

Step 6. Click the "Settings Tab" and Double-click "Deck Configuration" to open the Deck Configuration Menu.

Screen 2

Step 7. A new window will appear as shown in Screen 3. If your DAC-100 is not listed as connected to "FireWire on OHCI," click the "Add Deck" button.

Screen 3

Step 8. The "Deck Settings" Menu will open, click on the device button and choose "Datavideo," the "Dac-2" will appear as the default model.

Click "OK" to Confirm your selection.

Screen 4

Note: The DAC-100 uses the same deck configuration setting as the DAC-2

Using the Record Tool with the DAC-100 in Xpress DV 3.0

Step 1: From the Avid desktop, click "Tools" and select "Record" The Record Tool menu should appear as shown in Screen 5

Step 2: The Avid by default will display "No Deck" on the deck selection button. Please click the deck selection button and select "auto configure".

Screen 5

Step 3: A dialog box will appear like the example in Screen 6 and ask you to confirm that you want to "auto configure" the channel, select "Yes". The Avid should detect the DAC-100 as a "Generic DV Device-NTSC"

Screen 6

Step 4: Once auto configuration is complete a new window will appear, prompting you to select a tape. Please select a tape and click the "OK" button to confirm it.

Screen 7

When the record tool configuration is completed the record tool will look like the example in Screen 8.

Screen 8

SPECIFICATIONS:

INPUTS

*S-VHS sources	Y/C in: 4—pin 75 ohm DIN connector
*Composite	1.0Vp-p 75ohm RCA connector
*C-Sync	Composite Sync signal in for Gen-lock
*DV (iLink) Source	Data Transfer Rate 25Mbps, PAL 4:2:0 / NTSC 4:1:1

OUTPUTS

*S-VHS Source	Y/C out 4-pin 75ohm DIN connector
*Composite Video Source	1.0 Vp-p 75ohm RCA connector
*Frequency Response	4.5 MHz +/- 3 dB (DV input)
*DG, DP	+/- 3%, 3°
*Audio Sampling Rate	12bit 32KHz and 16bit 48KHz option
*DV (iLink) Source	Data Transfer Rate 25Mbps, PAL 4:2:0 / NTSC 4:1:1

GENERAL

Power (Included)	DC 5V / 6.0W AC Adapter
	Caution: DAC-100 requires DC 5 Volt +/- 4%,
	Use only Datavideo approved Power Adaptor.
Ambient Temperature	32° - 131°F (0° - 55°C)
Ambient Humidity	Less than 90 %
Dimensions	6.15”(W) × 6.0”(D) × 1.6”(H)
	156(W) × 150(D) × 40(H) m/m
Accessories (included)	1.8m IEEE 1394 cable
	3R to 3R RCA cable set
	S-Video cable
	User’s manual
	Power supply

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